



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Shizuo HATTORI et al.

Serial No.: 09/781,703 Group Art Unit: 1651

Filed: February 12, 2001 Examiner: Irene MARX

For: STABLE PQQ-DEPENDENT GLUCOSE DEHYDROGENASE COMPOSITION

DECLARATION

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Sir :

I, Seiji TAKESHIMA, declare as follows:

1. I, Seiji TAKESHIMA, have following address:
c/o TOYO BOSEKI KABUSHIKI KAISHA Tsuruga Institute of
Biotechnology 10-24, Toyo-cho, Tsuruga-shi, Fukui, Japan.
2. I received the degree of technology from FUKUYAMA
University in March 1991.
3. I have been employed by TOYO BOSEKI KABUSHIKI KAISHA
since 1991, I have been engaged in research of enzyme. I
am one of the inventors of the above-identified

application, and I am fully familiar with the subject matter thereof.

4. The table shows concentrations of stabilizing agents and enzyme and enzyme activity per composition weight (specific activity), in the compositions 4-9 of Example 1 and the compositions 2 and 3 of Example 2 described in the present specification.

| | Composition No. | Stabilizing agent (wt%) | Enzyme (wt%) | Enzyme activity (kU/g) |
|-----------|-----------------|--------------------------------|--------------|------------------------|
| Example 1 | 4 | BSA 30 | 26.6 | 950 |
| | | Glutamic acid 30 | | |
| | 5 | BSA 30 | 26.6 | 934 |
| | | α -cyclodextrin 30 | | |
| | 6 | BSA 30 | 26.6 | 937 |
| | | Aspartic acid 30 | | |
| Example 2 | 7 | BSA 30 | 26.6 | 868 |
| | | α -ketoglutaric acid 30 | | |
| | 8 | BSA 30 | 26.6 | 950 |
| | | α -ketogluconic acid 30 | | |
| | 9 | BSA 30 | 26.6 | 934 |
| | | Maric acid 30 | | |
| Example 2 | 2 | BSA 30 | 26.6 | 933 |
| | | α -cyclodextrin 30 | | |
| Example 2 | 3 | BSA 30 | 26.6 | 890 |
| | | Maric acid 30 | | |

The above table shows that GDH compositions having a specific enzyme activity of 100 to 2000 kU per gram of the composition can be actually obtained according to the present invention.

I, the undersigned, declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: August 8, 2003

Seiji Takeshima
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